CLAIMS

1. A method of decreasing the ability of a grease to support a voltage when functioning in a motor, the method comprising:

mixing conductive particles with the grease to form a conductive grease, the particles comprising at least one of carbon, metal and a combination thereof, and being the particles at least partially coated with a conductive polymer, wherein the conductive grease is less able to support a voltage when functioning in a motor than the grease.

2. The method of claim 1, wherein at least one of the particles comprises carbon.

3. The method of claim 1, wherein at least one of the particles comprises carbon black.

4. The method of claim 3, wherein the polymer comprises polyaniline.

5. The method of claim 1, wherein at least one of the particles comprises metal.

6. The method of claim 1, wherein the polymer comprises at least one of polyacetylene, polyphenylene, polyphenylenevinylene, polypyrrole, polyisothianaphthene, polyphenylene sulfide, polythiophene, poly(3-alkylthiophene), polyazulene, polyfuran, polyaniline and a combination thereof.

7. The method of claim 1, wherein the polymer comprises polyaniline.

8. The method of claim 1, further comprising running the motor.

9. The method of claim 1, wherein the motor comprises at least one of an induction motor, a brush DC motor, a brushless DC motor and a switched reluctance motor

10. A method of reducing electrostatic discharge machining in a motor, which erodes bearing surfaces of the motor, the method comprising:

mixing conductive particles with a grease to form a conductive grease, the particles being at least partially coated with a conductive polymer; and

at least partially encompassing ball bearings of the motor with the conductive grease,

whereby the conductive grease reduces electrostatic discharge machining in the motor, which erodes bearing surfaces of the motor, better than the grease.

11. The method of claim 10, wherein the motor experiences longer bearing life when using the conductive grease than when using the grease.

12. The method of claim 10, wherein the motor exhibits less bearing noise when using the conductive grease than when using the grease.

13. The method of claim 10, wherein at least one of the particles comprises carbon.

14. The method of claim 10, wherein at least one of the particles comprises carbon black.

15. The method of claim 14, wherein the polymer comprises polyaniline.

16. The method of claim 10, wherein the polymer comprises at least one of polyacetylene, polyphenylene, polyphenylenevinylene, polypyrrole, polyisothianaphthene, polyphenylene sulfide, polythiophene, poly(3-alkylthiophene), polyazulene, polyfuran, polyaniline and a combination thereof.

17. The method of claim 10, wherein the polymer comprises polyaniline.

18. The method of claim 10, further comprising running the motor.

19. The method of claim 10, wherein the motor comprises at least one of an induction motor, a brush DC motor, a brushless DC motor and a switched reluctance motor.

20. A motor comprising:

a frame;

a stator fixed relative to the frame;

a bearing assembly fixed relative to the frame, the bearing assembly including ball bearings at least partially encompassed by a conductive grease, the conductive grease comprising grease and particles comprising at least one of carbon, metal and a combination thereof, at least one particle being coated with a conductive polymer; and

a rotor supported by the bearing assembly for rotation relative to the stator.

21. The motor of claim 20, wherein at least one of the particles comprises carbon.

22. The motor of claim 20, wherein at least one of the particles comprises carbon black.

23. The motor of claim 20, wherein at least one of the particles comprises a metal particle.

24. The motor of claim 20, wherein the polymer comprises at least one of polyacetylene, polyphenylene, polyphenylenevinylene, polypyrrole, polyisothianaphthene, polyphenylene sulfide, polythiophene, poly(3-alkylthiophene), polyazulene, polyfuran, polyaniline and a combination thereof.

25. The motor of claim 20, wherein the polymer comprises polyaniline.

26. The motor of claim 20, wherein the conductive grease is capable of functioning for at least 10,000 hours in the motor.

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27. The motor of claim 20, wherein the motor comprising at least one of an induction motor, a brush DC motor, a brushless DC motor and a switched reluctance motor.